DOCUMENT RESUME

ED 282 891 TM 870 261

AUTHOR	Frederick, Judith M.
TITLE	Measuring School Effectiveness: Guidelines for Educational Practitioners.
INSTITUTION	ERIC Clearinghouse on Tests, Measurement, and Evaluation, Princeton, N.J.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO	TME-93
PUB DATE	Jan 87
CONTRACT	400-86-0018
NOTE	41p.
PUB TYPE	Information Analyses - ERIC Information Analysis Products (071) -- Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Academic Achievement; Achievement Tests; Definitions; Educational Objectives; Elementary Secondary Education; *Evaluation Criteria; *Institutional Characteristics; *Measurement Techniques; *School Effectiveness; Standardized Tests
IDENTIFIERS	*Effective Schools Research

ABSTRACT

Identifying effective and ineffective schools is a dominant issue in education in light of the increasing concern for achievement and accountability. Educators involved in school improvement projects face the dilemma of choosing from a variety of methods for measuring school effectiveness. The primary purpose of this paper is to describe for teachers and principals the methods and issues related to the identification of effective schools. Definition of school effectiveness is a complex task, one which should be expressed in terms of qualitative variables (school climate, instructional leadership, high expectations, etc.) as well as quantitative variables (achievement scores). The different methods used to measure school effectiveness can be analyzed along four basic dimensions: (1) level of aggregation; (2) criteria of effectiveness; (3) time frame of analysis; and (4) population. The patterns that have emerged in studying schools as complex social systems reveal a set of distinct characteristics in high-achieving schools. These factors include: (1) strong administrative leadership, particularly in the area of curriculum and instruction; (2) an orderly, safe environment conducive to learning; (3) a pervasive and broadly understood instructional focus emphasizing a commitment to basic skills; (4) teacher behaviors that convey the expectation that all students must obtain at least minimum mastery; and must obtain at least minimum mastery; and pupil achievement as the basis of program evaluation. (LMO)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED282891

MEASURING SCHOOL EFFECTIVENESS:

Guidelines for Educational Practitioners

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

TME REPORT 93

by

Judith M. Frederick

ERIC®

TESTS MEASUREMENT EVALUATION

EDUCATIONAL TESTING SERVICE
PRINCETON, NEW JERSEY 08541-0001

BEST COPY AVAILABLE

TM 870 261

ERIC/TME Report 93

MEASURING SCHOOL EFFECTIVENESS: GUIDELINES FOR EDUCATIONAL PRACTITIONERS

by

Judith M. Frederick, Principal

Wareham Public Schools, Massachusetts

January 1987

ERIC Clearinghouse on Tests, Measurements, and Evaluation

Educational Testing Service, Princeton, NJ 08541-0001

Office of Educational Research and Improvement
U.S. Department of Education

This publication was prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education under contract No. OERI-400-86-0018. The opinions expressed in this report do not necessarily reflect the position or policies of OERI or the Department of Education.

TABLE OF CONTENTS

Introduction.....1

Defining Effectiveness.....4

Pupil Achievement as a Measure of Effectiveness.....9

Measuring School Effectiveness: The Whole Picture.....20

Summary.....27

References.....31

INTRODUCTION

Identifying effective and ineffective schools is a dominant issue in education in light of the increasing concern for achievement and accountability. In the last decade, educational research efforts concerning effective schools have focused on identifying the characteristics of an effective school and establishing specific criteria for measuring effectiveness. The literature on effective schools challenges the assumption that differences among schools have little or no effect on achievement. In the last decade, we have witnessed a surge of reports and papers demonstrating that schools can and do have an effect on student achievement because of specific school characteristics.

Reviews of the effective schools literature reveal that there is no consensus on the definition of an effective school. The research is characterized by a variety of designs, methods, and measures of effectiveness making comparsions difficult. Educators involved in school improvement projects face the dilemma of choosing from a variety of methods for measuring school effectiveness. They must consider such questions as:

* What are the key variables that should be measured? Should the criteria of effectiveness include cognitive skills only or cognitive skills and social skills, psychomotor skills, emotional well-being, cultural appreciation, etc.?

* For whom should the school be effective?

* At what level should the data analysis take place? Should the data be analyzed at the school level or for specific cohorts of students?

* How will the variables be measured?

* Will the data be gathered at a single point in time or longitudinally?

Critics of the effective schools research have identified several methodological and conceptual shortcomings in the research that has been conducted to date (Purkey & Smith, 1982). Despite the criticism, the effective schools movement continues gaining momentum among school personnel whose primary responsibility is to meet the challenge of providing each student with the opportunity to develop to the fullest potential.

The goal of effectively and equitably providing a quality education for all students is a challenge facing educators. To determine if schools are meeting this challenge, it is important for teachers and principals to have the means for measuring school effectiveness. Michael Kean warned, "Unless the nature of effectiveness can be described and agreed upon, researchers face the possibility of identifying variables which may relate to the conception of an effective school not shared or accepted by those responsible for teaching children" (1982, p.2).

The primary purpose of this paper is to describe for

teachers and principals the methods and issues related to the identification of effective schools. The question addressed quite simply is "How do we know an effective school when we see one?" In order to answer that question teachers and principals who desire to implement school improvement projects or evaluate their school's performance must have dependable, accurate tools. The public that supports American education has the right to a truthful response.

DEFINING EFFECTIVENESS

The history of the "search for effective schools" that has pervaded the field of education for the past decade reveals no consensus on the definition of educational effectiveness. Although much is written, we still do not have a definitive answer to the question, "What constitutes an effective school?" There are, however, several trends emerging in the literature that merit consideration.

Effectiveness, according to Webster's New Riverside University Dictionary, is a noun related to producing a desired or intended effect. As such, the outcome is very specific and factual. Most researchers have defined effectiveness in terms of measurable student outcomes. The reasoning behind this seems clear since the quality of the "product" of the school, the student, is the most critical element of the effective school (Westbrook, 1982, p.7) The literature indicates that improved achievement is the ultimate goal of all that goes on in schools.

In the exisiting literature, researchers most frequently use standardized test scores as the primary outcome measure in assessing a school's effectiveness. The rationale for using standardized achievement tests, in addition to their efficiency, is that they are "fair, scientific, and objective in their assessments of the pupils who take them" (Strenio, 1981, p.5).

In conjunction with using standarized achievement scores as a measure of effectiveness, a second trend is evident in the literature on school effectiveness. Educators and researchers alike join in cautioning against the use of standardized achievement scores as the sole measure for describing school success. It is a mistake to believe that a single measure is an adequate assessment of an effective school. To develop a comprehensive definition of an effective school, the concept of a school as a social organization should be considered.

Measuring an effective school is a complex task. It requires that principals and teachers view the school as a dynamic social structure in which instructional effectiveness (as measured by pupil achievement scores) is a subset of a larger systematic concept of school effectiveness. Brookover (1979) emphatically stated that the characteristics of an effective school are not isolated components, but that they are integrated and must be considered as a whole. Definitions of effectiveness should encompass qualitative variables (i.e., school climate, instructional leadership, high expectations, etc.) as well as quantitative variables (public achievement scores).

If one accepts the view that schools are complex social systems, one must consider the issue of time in measuring school effectiveness. The importance of viewing schools and how they change over time is inherent in a

systems approach to school effectiveness. In their article, "Research on Effective Schools: A Cautionary Note," Rowan, Bossert, and Dwyer (1983) report that many researchers often take a "snapshot" of one year's achievement and label a school as effective or ineffective on the basis of those results. Few definitions require schools to be consistently effective over time in order to be described as effective.

The demographic characteristics of the community and the particular needs of the school should also be weighed carefully in the process of defining effectiveness. Much of the impetus for the effective schools movement originated in public concerns over the issue of equal educational opportunity for the poor and minority children, but definitions that focus exclusively on data grouped by socioeconomic status or race may not be applicable to high SES suburban schools or schools located in rural areas. Effectiveness is a value-laden concept, and thus a school's methods for measuring effectiveness should reflect the community it serves. One's vision of an effective school ought to include a commitment to both a high level of achievement and an equitable distribution of achievement among all subgroups within the particular community under study.

Defining an effective school is a complex task. A major component of any school effectiveness assessment is the use of standardized achievement scores as a measure of effectiveness. There is, however, a temptation to assume

that pupil achievement can be analyzed in isolation and that improvement programs can be implemented solely on the basis of achievement test results. On the contrary, the school effectiveness literature suggests that change to greater academic effectiveness requires a comprehensive approach. Standardized achievement test scores represent just one piece of the school effectiveness puzzle.

PUPIL ACHIEVEMENT AS A MEASURE OF EFFECTIVENESS

Dimensions of Effectiveness

Despite the relatively young age of the school effectiveness movement, there are many different methods for evaluating school effectiveness on the basis of pupil achievement scores. Educators face the problem of choosing a measure of instructional effectiveness from an array of methods. Table 1 presents a sample of the methods used to measure school effectiveness using standardized test scores.

Although these definitions are only a representative sample of the measures that have been used to assess school effectiveness, they demonstrate that there is much diversity in how effectiveness is defined. Undoubtedly, some of this diversity can be attributed to the fact that effectiveness is a value-laden concept affected by the nature of the community. Because these methods have been applied in different schools, it is difficult to judge their individual merits or to compare results. Validity studies have shown that these methods of defining effectiveness have low correlations with one another and that the same school might be classified as effective or ineffective depending on which method you choose (Frechtling, 1982; Frederick, 1984; Silverman, 1984).

Analysis of the methods used to measure school effectiveness reveals a number of similarities among the various definitions. The different methods used to measure school

Table 1

DEFINITIONS OF SCHOOL EFFECTIVENESS

Edmonds, 1982 Gauthier, 1982 (Connecticut School Effectiveness Project)	An effective school is one in which the proportion of low income children obtaining minimum mastery is equal to the proporation of middle income children achieving minimum mastery.
Salganik, et al., 1980	An effective school is one in which the observed average exceeds the predicted mean achievement.
Lezotte, et al., 1974	An effective school is one whose achievement scores are at or above the city-wide average grade equivalent.
Brookover, 1981	An effective school is one in which a major proportion of the students achieve at or above the average national levels.
McCormack-Larkin and Kritek, 1982 (Project R.I.S.E.)	An effective school is one in which the percentage of students scoring in the average and high achievement categories (Stanines 4-9) is increasing while the percentage of students in the low achievement categories (Stanines 1,2, 3) is dropping.
Clauset and Gaynor, 1982	An effective school is one in which the achievement gap with respect to grade level standards for initially low-achieving students is closed over time.
Dorman, 1981 (Middle Grades Assessement Program)	An effective school is one in which the initial gap between cohort groups based on race and socioeconomic status remains stable or is reduced.
Frederiksen, 1975	An effective school is one in which two or more independent groups of pupils perform about the 75th percentile.
Clark and McCarthy, 1983 (New York City's Improvement Project)	An effective school is one in which the school mean gain is at or above the city-wide gain.

effectiveness reveal a number of similarities among the various definitions. Tne different methods used to measure school effectiveness can be analyzed along four basic dimensions:

1. Level of Aggregation - Are the data collected and analyzed to produce school-wide averages, or are specific cohort groups (based on socioeconomic status, race, or achievement) identified and compared? An example of data aggregated at the school level can be found in Table I (Clark & McCarthy, 1983), where the school mean gain is compared to a city-wide gain. Edmonds, (1982), on the other hand, required the evaluator to analyze the data for specific subgroups based on socioeconomic status.

2. Criteria of Effectiveness - Is the determination of effectiveness based on internal standards (i.e., last year's performance) or an external standard (i.e., national norms)? Project R.I.S.E. (McCormack-Larkin & Kritek, 1982) used an internal standard where the performance of each achievement group is compared to their performance from the year before. External standards were applied by Brookover (1981) whose definition specifies that students must score at or above the average national level (50th percentile) in order for the school to be described as effective.

3. Time Frame of Analysis - Is the effectiveness of the school measured at a single point in time or over a period of one or more years? Brookover's (1981) definition of

effectiveness requires an investigator to analyze data for a single year as opposed to Clauset and Gaynor (1982) who suggested that the performance of the initially low achieving students must be examined for six years in order to assess a school's effectiveness.

4. Population - In using multiyear methods, are the scores for the same students compared over time or are scores for different groups of students compared? Clauset and Gaynor (1982) recommended following the performance of the same group of students for six years. In contrast, Project R.I.S.E. uses a method in which the performance of the third grade population from one year is compared to the grade population the following year.

Before beginning an analysis of student achievement data, it is important to consider carefully each of these dimensions. The importance of examining these variables cannot be emphasized enough. Airasian (1979) pointed out: ". . . the methodological choices an evaluator makes are important because, taken together, they help to define the de facto conceptual framework with which to examine the results . . ." (p.1).

The results of two research studies conducted at Boston University clearly revealed that different methods for measuring school effectiveness do, in fact, lead to different conclusions depending upon the configuration of the four basic dimensions of the method (Frederick, 1984;

Silverman, 1984). The demographic characteristics, the particular needs of one's school, and the philosophical groundwork of the school's decision-making process must also be kept in mind in determining which dimensions to include in an algorithm for measuring school effectiveness.

Implications for Practice

The following recommendations reflect both my understanding of what the existing research indicates about identifying effective schools as well as my intuition as an elementary school principal.

Level of Aggregation. One question that must be answered by principals and teachers in formulating a definition of effectiveness is: For whom is the school effective? Airasian et al. (1979) pointed out that aggregating data at the school level only may mask differential effects of specific subgroups of pupils. For this reason, methods using school averages should be avoided.

Within a school, data may be aggregated for groups or cohorts based on socioeconomic status, race, or achievement. Edmonds' (1979a) concern with equity seems an appropriate starting point in decisions regarding both the level of aggregation and the criterion for selecting cohorts. Principals and teachers facing the decision of how to group the data can determine the appropriate type of aggregation by asking: Which students are not getting an opportunity to develop their fullest potential? It is my

belief that the most equitable measure of school effectiveness is based upon achievement or readiness cohorts rather than socioeconomic status or race.

For example, in one suburban elementary school the Metropolitan Readiness Test is administered in March of the kindergarten year. The national percentile scores from this test are used to place students into three cohorts: initially low-, initially average-, and initially high-achieving. For each subsequent year (grades 1-6), the mean national percentile score in Reading and Mathematics is calculated for each cohort following the administration of the Metropolitan Achievement Test. The results for each cohort are analyzed annually to determine if all pupils are making progress toward an established standard regardless of race, social class, or ethnicity.

This method of aggregating data by achievement test socres or readiness test scores is consistent with Bloom's theory of schooling. In his book, Human Characteristics and School Learning (1982), Bloom identified three interdependent variables essential to any investigation of school effectiveness:

1. cognitive entry behaviors - prerequisite cognitive skills
2. affective entry behaviors - interests, attitudes, and motivations

3. quality of instruction - degree to which the presentation, explanation, and ordering of the elements of the task to be learned approach the optimum for a given learner.

Bloom contended that "the attributes of the students prior to the learning tasks have much to do with how well they will learn the tasks" (p. 32). He further stated that "there is considerable evidence that differences in school achievement which appear relatively early tend to remain and even increase over the many years in school" (p.9). Hopefully, by identifying the low-achieving cohort as early as possible, appropriate teaching techniques and intervention strategies can be implemented to help overcome the initial differences in achievement.

Criteria of Effectiveness - The "criteria of effectiveness" is the standard against which student performance is compared. Two types of norms are found in the exisitng methods: internal and external. External norms are those that compare pupil performance outside of the school, such as the average national percentile or a city-wide mean. Methods in which the prior data on the population under study serve as the standard against which to judge performance are internal norms.

The majority of public schools that use standardized tests to assess pupil performance present the data to the public in the form of national percentiles (external

norms). The use of national percentile scores as the level against which performance is judged permits educators to measure effectiveness objectively and equitably. In addition, national percentile scores are easily interpreted by parents and the general public.

Time Frame of Analysis - The methods identified in Table 1 use either "point in time" measures (one test administration) or "interval" measures. Interval measures may include either pretest and posttest data or a longitudinal measure where data from several successive testing periods are analyed.

Critics of the effective schools literature warn against the use of point-in-time measures. They argue that such measures present only a "snapshot" of one year's achievement and raise serious concerns about the stability of such measures (Purkey & Smith, 1982; Rowan, Bossert, & Dwyer, 1983). Consequently, principals and teachers should not judge a school based on a single application of a method. Longitudinal tracking of pupil achievement test scores over six years for cohorts in a K-6 elementary school would provide a more realistic and comprehensive picture of a school's effectiveness.

Population - Two types of pupil population are used in school effectiveness studies. The methods include an assessment of the performance of either the same set of students tested at various time intervals or different

groups of students measured at various time intervals. For "point in time" studies, "same" or "different" population obviously has no meaning.

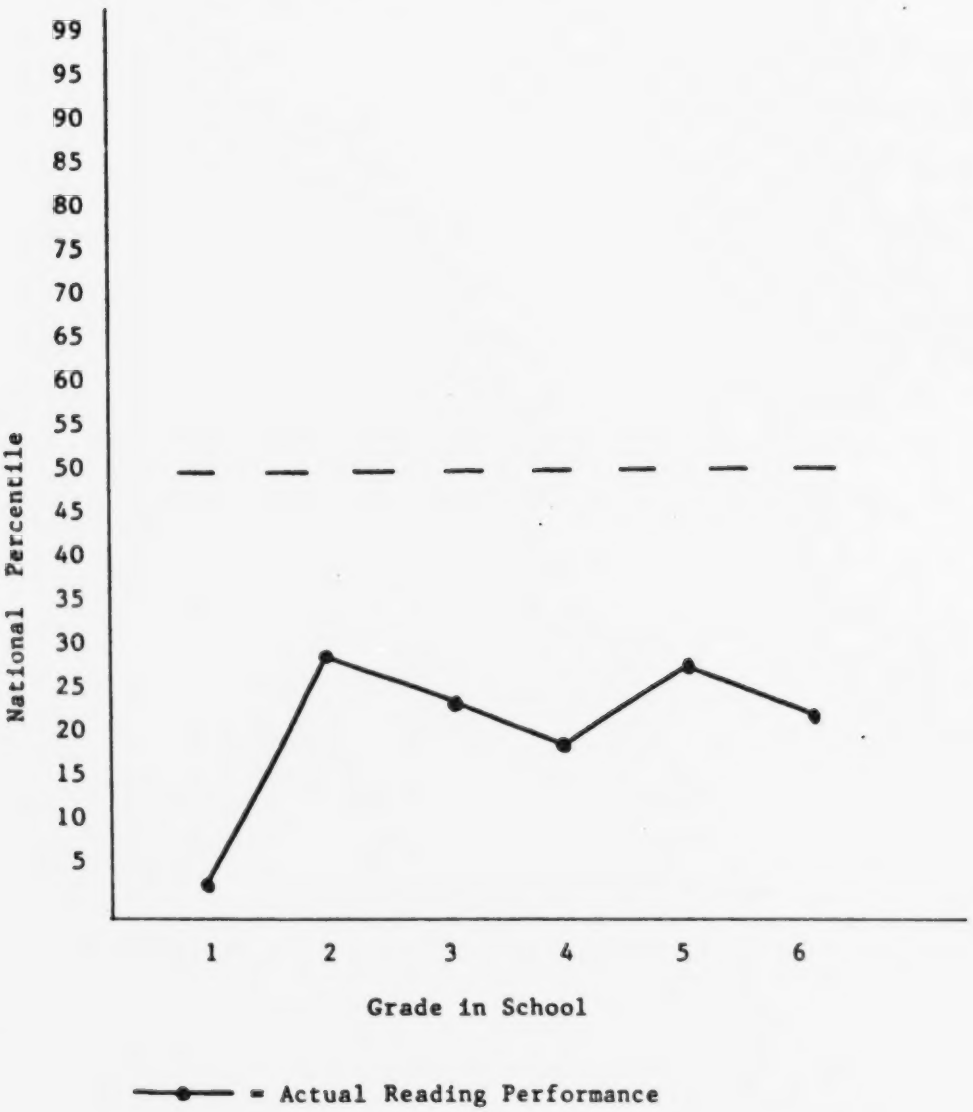
It is important to observe the performance of the "same" set of students for a specified number of years when policy and program decisions are based on the interpretation of test results. With methods using a population of "different" students, it is difficult, if not impossible, to determine whether to attribute the results to program or policy issues or to the fact that there is a different population of pupils who may have been initially functioning at a different level of achievement from the previous year's population. To use test results as part of the decision-making process in striving for improved instructional effectivness, it is necessary to track the "same" set of pupils within a school over a given period of time.

Figure 1 provides an example of the previously stated recommendations applied to achievement test data collected from a suburban elementary (K-6) school. The data were analyzed by readiness cohorts whose performance is compared to the average national percentile over a six-year period. In developing the profile for the low-achieving cohort, the results of the Metropolitan Readiness Test and the Metropolitan Achievement Test were analyzed in the following manner.

1. Identify the Kindergarten students whose scores

Figure 1

READING ACHIEVEMENT FOR INITIALLY LOW-ACHIEVING COHORT



fall below the 29th percentile (Raw Score 0-44) on the Metropolitan Readiness Test. The 29th percentile is used as the criterion according to the national norms established by Psychological Corporation, the publishers of the Metropolitan Readiness Test. The criterion represents the level at which students are "likely to have difficulty in first grade work."

2. Calculate the mean national percentile score for the Reading Comprehension subtest of the Metropolitan Achievement Test for the cohort for each year of attendance at the elementary school (Grades 1-6). The choice of Reading Comprehension as the measure of performance in the area of Reading reflects the philosophy of the school district that states that the primary goal of reading is to achieve understanding.

The mean national percentile score for this cohort is graphically depicted in Figure 1 for each successive year in school, beginning in first grade. The graph indicates that the initially low-achieving cohort scored in the third percentile in the first grade. In the second grade, the mean national percentile score was 29. In the third and fourth grade, the mean score for the cohort dropped to the 18th percentile. The decrease was followed by a moderate increase in the fifth grade and another decrease in the

sixth grade. The data indicate that the achievement scores for this group were inconsistent over the six-year period. Although some progress was made toward increasing the level of performance for the cohort, there is still a significant gap between their performance at the end of sixth grade and the national average (50th percentile).

A comprehensive assessment of the school's effectiveness should not be limited to an evaluation of Reading achievement. Instead, it should include an analysis of achievement test scores in the area of Mathematics, as well as any other areas that the district may want to consider. Similar results for groups that can be considered initially average- and initially high-achieving should be added to the graph.

This method of assessing school effectiveness, although time consuming initially, can be readily accomplished by using a computer program to record the annual achievement test scores. The analysis will provide a comprehensive picture of the instructional effectiveness of the school that is well worth the commitment of time, effort, and financial resources.

MEASURING SCHOOL EFFECTIVENESS: THE WHOLE PICTURE

Educational panaceas have risen and fallen in the public schools. The effective schools movement has weathered criticism and scrutiny for five years and continues to gain momentum because it differs from other research in several aspects. First, it emphasizes that the primary focus of the schools is instructional effectiveness. Second, it argues that schools must assume responsibility for success or failure in student learning. All pupils are expected to achieve regardless of their home environment, family income, ethnic identity, or sex. Finally, researchers have begun to examine and identify the complex and dynamic process variables (i.e., school climate, instructional leadership, etc.) that characterize schools with high achievement levels.

It is important to remember that academic achievement is but one of many goals of education. It is an end product. How effective would a school be if it emphasized cognitive skills and not non-cognitive outcomes (i.e., climate, discipline, leadership, etc.) that also form part of a school's mission? We learn from the effective schools literature that other aspects of schooling are equally important and may, in fact, make powerful contributions to student learning.

Perhaps the best known summary of the characteristics of an effective school is provided by Ronald Edmonds (1982).

He indentified five distinct characteristics in high-achieving schools:

1. Strong administrative leadership, particularly in the area of curriculum and instruction;
2. an orderly, safe environment conducive to learning;
3. a pervasive and broadly understood instructional focus emphasing a commitment to basic skills;
4. teacher behaviors that convey the expectation that all students are expected to obtain at least minimum mastery; and
5. the use of measures of pupil achievement as the basis of program evaluation. (p.4)

Use of pupil achievement scores as a measure of effectiveness has already been discussed. The remaining characteristics should be thought of as "means" or enabling characteristics whose presence should serve to assure that a school is moving toward effectiveness. These aspects of schooling are more difficult to quantify and can be assessed more effectively using qualitative methods such as questionnaires, interviews, observations, and case studies. The Connecticut School Effectiveness Project (Pecheone & Shoemaker, 1984) has an extensive battery of instruments to possess the degree to which the characteristics are present

in a school. In addition, Barbara Guzzetti (1983) included a comprehensive review of several effectiveness questionnaires in her "Report on Instruments for Measuring Effective Schools."

The questions that follow are designed to serve as a starting point for a faculty and principal to begin examining their school in relationship to the school effectiveness characteristics. The questions may be used to develop questionnaire or interview items like the examples shown in Table 2 from The Connecticut School Interview (Villanova, 1982, pp. 39-47).

Archival data such as student handbooks, school policies and curricula, vandalism and attendance reports, report cards, etc. should be gathered and analyzed with effective schools. The information gleaned from this inquiry should be used to develop and implement an action plan that is meaningful to the faculty and principal of the school.

Characteristic - Strong administrative leadership, particularly in the area of curriculum and instruction.

* Does the administrator demonstrate knowledge about the process of school improvement?
* Is the administrator trained to evaluate instruction?
* Are there clear procedures for staff evaluation?
* Do the teachers recognize and respect the principal's competence as an instructional leader?

Table 2

Sample Questionnaire and Interview Items

Directions: Place an X on the response that best summarizes your opinion.

INSTRUCTIONAL LEADERSHIP

Describe the process of a typical formal classroom observation in this school.

There is no typical pattern. The principal stops into the classroom and may follow-up with an informal note.	The principal informs teacher of observation. A lesson is observed and feedback in some form may be given.	The principal and teacher informally plan an observation. Feedback follows the observation, usually in the form of a post-conference.	The principal and teacher plan for each observation. Post conferences follow each observation.	The principal and teacher plan an observation at a pre-conference. The observation is of a post-conference.

CLEAR SCHOOL MISSION

Is there a written statement of purpose for this school that guides the instructional program?

There is no agreed upon, written statement of purpose.	A written statement exists, but it has little influence on the instructional program.	A statement of purpose has been developed by admin. and faculty of this school. A few general instructional decisions are guided by this statement.	A statement exists and some school decisions. result from it.	The statement is the driving force behind most important school decisions.

Directions: Circle the response that best summarizes your opinion.

SAFE AND ORDERLY ENVIRONMENT

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Teachers, administrators and parents assume responsibility for discipline in this school.	SD	D	U	A	SA

* Does the administrator offer constructive feedback of the teaching staff on a regular bias?
* Are instructional issues the subject of discussion at faculty meetings?
* Does the principal visit classrooms on a regular basis?
* Does the administrator use yearly achievement test results as a source of information for planning improvement efforts?
* Does the principal plan staff development activities?

Characteristic - An orderly, safe environment conducive to learning.

* Are pupils involved in the school operation (i.e., office assistants, monitors, tutors, etc.)?
* Do pupils assume responsibility for their own belongings and supplies?
* Is the school a safe and secure place to work?
* Is there a written code of conduct with clearly defined standards and consequences?
* Is the responsibility for discipline shared by teachers, administrators, and parents?
* Is the building clean and well-maintained?
* Are repairs completed within a reasonable amount of time?
* Are there rewards for good citizenship?

* Are models of appropriate behaviors, attitudes, and beliefs encouraged by the school climate?
* Is the school climate such that it fosters respect?

Characteristic - A pervasive and broadly understood instructional focus emphasizing a commitment to basic skills.

* Are school policies and procedures designed to promote student achievement?
* Are teachers expected to teach for mastery?
* Are interruptions during instructional time kept to a minimum?
* Is there a written curriculum for each subject area?
* Are teachers encouraged to keep abreast of the current developments in education?
* Is there an on-going in-service education program focusing on the needs of the teachers?
* Does the school have a clearly defined school mission?

Characteristic - Teacher behaviors that convey the expectation that all students are expected to obtain at least minimum mastery.

* Are grade level minimal competencies established?
* Are expectations for academic performance and

behavior clearly articulated to parents and pupils?

* Do pupils experience a high rate of success on academic tasks?
* Do students feel that the school helps them master academic work?
* Do school personnel, students, and the community take pride in their school?
* Are students expected to master skills and concepts?
* Do teachers believe that all students can master basic skills as a result of the instructional program?
* Are expectations constantly monitored, reviewed, and clarified?

SUMMARY

The effective schools movement has mushroomed in the last decade in response to continued and increasing pressure from the American public to provide a quality education for all students. It has struck a responsive chord in the hearts, souls, and minds of educators and the public alike whose main concern is to improve both the image and the reality of American education.

The effective schools research has demonstrated that schools can and do make a difference in how much and how well children learn. The findings of this body of literature have contributed immeasurably to our understanding of school practices that promote high academic achievement.

Defining and measuring an effective school is a complex task. Teachers and principals must work together to develop a vision of an effective school that includes a commitment to both quality and equity. The definition should reflect the values of the community that the school serves.

An effective school is defined in the literature in a variety of ways. Pupil achievement is generally recognized as the primary variable used to measure school effectiveness. The different methods used to assess school effectiveness using standardized test scores are composed of various configurations of four basic dimensions: Level of Aggregation; Time Frame of Analysis; Population; and

Criteria for Effectiveness.

It is my belief that elementary school personnel should use a method that is based on readiness cohorts whose performance is compared to national percentiles over six years to measure instructional effectiveness. This configuration of the four basic dimensions will assess the quality of the school in an equitable manner.

Educators and researchers associated with the effective schools literature have emphasized a multidimensional view of effectiveness with the assessment of achievement scores representing only one aspect of the measurement process. Definitions of effectiveness must be as comprehensive as the tasks that schools perform. Change to greater academic effectiveness requires a long-range, meaningful plan initiated and implemented at the building level.

The patterns that have emerged in studying schools as complex social systems reveal a set of distinct characteristics in high-achieving schools. These school-level factors highlight the importance of a commitment to basic skills as the primary instructional goal. They stress the need for an orderly, safe environment that permits teachers and students to devote their energies to teaching and learning. In high achieving schools, the principal is likely to be a strong instructional leader who strives to provide an environment conducive to learning. Pupil performance is assessed frequently, and the results are used to

assure further success. Finally, the success in mastery of basic skills is in part a function of the teachers' belief that all children can and will learn.

Teachers and principals interested in improving pupil achievement would do well to undertake a comprehensive assessment of the characteristics of an effective school. The worth of the effective schools movement lies in its applicability and use by school personnel. It is a grass-roots approach in which teachers and principals work together to increase their effectiveness in raising the achievement levels of children. The process requires a systematic, school-wide focus to bring about long-term, meaningful change.

The patterns and conclusions that emerge from the school effectiveness research are supported, as Purkey and Smith (1982) have said, by both theory and common sense. There is no guarantee that incorporation of these guidelines will automatically produce achievement gains, but the effective schools movement has given us what appears to be a promising approach for improving achievement for pupils from all walks of life.

REFERENCES

Adams, M. (1980). Failures to comprehend and levels of processing in reading. In R. Spiro, B. Bruce, & W. F. Brewer (Eds.), Theoretical issues in reading comprehension. Hillsdale, NJ: Lawrence Erlbaum Associates.

Alrasian, P. et al. (1979). Concepts of school effectiveness as derived from research strategies: Differences in findings. Washington, DC: National Institute of Education. (ERIC Document Reproduction Service No. ED 192 456)

Bloom, B. S. (1982). Human characteristics and school learning. New York: McGraw-Hill.

Brookover, W. (1981). [Book Review of Why do some urban schools succeed? The Phi Delta Kappa Study of Exceptional Urban Elementary Schools.] Harvard Educational Review, 51, 439-442.

Brookover, W. et al. (1979). School social systems and student achievement: Schools can make a difference. New York: Praeger Publishers.

Clark, T., & McCarthy, D. (1983). School improvement in New York City: The evolution of a project. Educational Researcher, 12(4), 17-24.

Clauset, K., & Gaynor, A. (1982). A systems perspective on effective schools. Educational Leadership, 40(3), 54-59.

Cohen, M. (1982). Effective schools: Accumulating research findings. American Education, 18(1), 13-16.

Cohen, M. (1981). Effective schools: What the research says. Todays Education, 1981, 70, 46-79.

Cuban, L. (1983). Effective schools: A friendly but cautionary note. Phi Delta Kappan, 64(10), 659-696.

Dorman, G. (1981). Middle grades assessment program: User's manual. Chapel Hill, NC: Center for Early Adolescence.

Edmonds, R. (1982). "Programs of school improvement: An overview." Educational Leadership, 40(3), 4-11.

Edmonds, R. (1979a). "Effective schools for the urban poor." Educational Leadership, 37, 5-18, 20-24.

Edmonds, R. (1979b). Some schools work and more can. Social Policy, 9, 28-33.

Edmonds, R., & Frederiksen, J. (1976). Search for effective schools: The identification and analysis of city schools that are instructionally effective for poor children. Washington, D. C.: National Institute of Education. (ERIC Document Reproduction Service No. ED 170 396)

Eubanks, E., & Levine, D. (1983). A first look at effective schools projects in New York City and Milwaukee. Phi Delta Kappan, 64(10), 697-702.

Frechtling, J. (1983, April). Problems in evaluating school effectiveness: A shopping list of dilemmas. Paper presented at the meeting of the American Educational Research Association.

Frechtling, J. (1982, October). The measurement of effectiveness. Paper presented at Evaluation `82, Baltimore, MD. (ERIC Document Reproduction Service No. ED 229 426)

Frederick, J. M. (1984). A comparison of the major algorithms for measuring school effectiveness. Unpublished doctoral dissertation, Boston University.

Frederiksen, J. (1975). School effectiveness and equality of educational opportunity. Harvard University, Center for Urban Studies.

Frederiksen, J. (1980). Models for determining school effectiveness. Washington, D.C.: National Institute of Education. (ERIC Document Reproduction Service No. ED 189 149)

Gauthier, W. (1982, March). Connecticut perspectives on instructionally effective schools. Paper presented at the meeting of the American Educational Research Association. New York.

Guzzetti, B. (1983). Report on instruments for measuring school effectiveness. Aurora, CO: U. S. Department of Education. (ERIC Document Reproduction Service No. ED 253 578)

Hathaway, W. (1983, April). Effective teachers in effective schools. Paper presented at the meeting of the American Education Research Association, Montreal, Quebec. (ERIC Document Reproduction Service No. ED 235 796)

Houlihan, F. (1983). Using the right variables in measuring school effectiveness. NASSP Bulletin, 67(465), 9-15.

Kean, M. (1982, June). Issues in identifying effective schools. Paper presented at the National Assessment Conference on Large Scale Assessment, Boulder, CO. (ERIC Document Reproduction Service No. ED 222 571)

LeMahieu, W. (1985). Establishing the credibility of test results. Educational Leadership, 43(2), 60-62.

Lezotte, L. et al. (1974). Remedy for school failure to equitably deliver basic school skills. Cambridge, MA.: Harvard University. (ERIC Document Reproduction Service No. ED 170 396)

McCormack-Larkin, M., & Kritek, W. (1982). Milwaukee's Project R.I.S.E. Educational Leadership, 40(3), 16-21.

Miles, M., Farrar, E., & Neufield, B. (1983). The extent of adoption of effective schools programs. Washington, DC.: Department of Education (ERIC Document Reproduction Service No. ED 228 242)

Minnesota State Department of Education. (1985). A comprehensive plan for school effectiveness. St. Paul, MN.: Author. (ERIC Document Reproduction Service No. ED 258 358)

Pecheone, R., & Shoemaker, J. (1984). An evaluation of school effectiveness programs in Connecticut. Connecticut Department of Education, 1984. (ERIC Document Reproduction Service No. ED 261 103)

Purkey, S., & Smith, M. (1983). School reform: The policy implications of the effective schools literature. Paper presented for the National Institute of Education, Washington, D. C. (ERIC Document Reproduction Service No. ED 245 350)

Purkey, S., & Smith, M. (1982, August). Ends not means: The policy implications of effective schools. Paper presented at the meeting of the American Psychological Association, Washington, DC. (ERIC Document Reproduction Service No. ED 224 112)

Purkey, S., & Smith, M. (1982). Too soon to cheer? Synthesis of research on effective schools. Educational Leadership, 40(3), 64-69.

Rowan, B., Bossert, S., & Dwyer, D. (1983). Research on effective schools: A cautionary note. Educational Researcher, 12(4), 24-31.

Salganik, M. et al. (1980). Researchers team with reporters to identify schools that work. Educational Research & Development Report, 3(1), 2-7.

Serow, R., & Jackson, H. (1983). Using standardized test data to measure school effectiveness. NASSP Bulletin, 67(465), 20-25.

Silverman, R. (1984). Measures of school effectiveness: A comparison of the major algorithms. Unpublished doctoral dissertation, Boston University. 1984.

Strenio, A. (1981). The testing trap. New York: Rawson, Wade Publishers, Inc.

Thomas, M. (1981). Variables of educational excellence. The Clearinghouse, 54(6), 251-253

Villanova, R. (1982, March). Measuring of validating the characteristics of instructionally effective schools in Connecticut. Paper presented at the meeting of the American Educational Research Association, New York, (ERIC Document Reproduction Service No. ED 214 979)

Westbrook, J. (1982). Considering the research: What makes an effective school? Washington, DC.: National Institute of Education. (ERIC Document Reproduction Service No. ED 223 008)

ERIC/TME REPORT 93

MEASURING SCHOOL EFFECTIVENESS:
GUIDELINES FOR EDUCATIONAL PRACTITIONERS

by

Judith M. Frederick

Identifying effective and ineffective schools is a dominant issue in education in light of the increasing concern for achievement and accountability. Educators involved in school improvement projects face the dilemma of choosing from a variety of methods for measuring school effectives. The primary purpose of this paper is to describe for teachers and principals the methods and issues related to the identification of effective schools. Measurement issues concerning the level of data aggregation, the criteria of effectiveness, the time frame of analysis, and the population studied are addressed.

ORDER FORM

Please send_____copies of ERIC/TME Report 93, "Measuring School Effectiveness: Guidelines for Educational Practitioners," at $5.00 each.

Name_____

Address_____

_____Zip_____

Total Enclosed_____

Return this form to:

ERIC Clearinghouse on Tests, Measurement, and Evaluation
Publications Orders
Educational Testing Service
Princeton, NJ 08541-0001

RECENT TITLES
IN THE ERIC/TME REPORT SERIES
4/1/87

#93 - Measuring School Effectiveness: Guidelines for Educational Practitioners, by Judith M. Frederick. 1/87, $5.00.

#92 - Teacher Competency Examination Programs: A National Survey, by Irvin J. Lehmann and Susan E. Phillips. 8/86, $8.00.

#91 - Evaluation of Corporate Training Programs, by Dale Brandenburg and Martin E. Smith. 5/86, $9.00.

#90 - Assessing Higher Order Thinking Skills, by C. Phillip Kearney, and Others. 4/86, $7.50.

#89 - Microcomputer Programs for Educational Statistics: A Review of Popular Programs, by Paul M. Stemmer and Carl F. Berger. 3/86, $7.50.

#88 - Computer-Assisted Test Construction. A State of the Art, by Tse-chil Hsu and Shula F. Sadock. 12/85, $7.50.

#87 - The Statewide Assessment of Writing, by Peter Afflerbach. 8/85, $7.50.

#86 - The Effects of Testing on Teaching and Curriculum in a Large Urban School District, by Floraline Stevens. 12/84, $6.00.

#85 - Reporting Test Scores to Different Audiences, by Joy A. Frechtling and N. James Myerberg. 12/83, $7.00.

#84 - Assessment of Learning Disabilities, by Lorrie A. Shepard. 12/82, $6.50.

#83 - Statistical Methodology in Meta-Analysis, by Larry V. Hedges. 12/82, $7.00.

#82 - Microcomputers in Educational Research, by Craig W. Johnson. 12/82, $8.50.

#81 - A Bibliography to Accompany the Joint Committee's Standards on Educational Evaluation, compiled by Barbara M. Wildemuth. 12/81, $8.50.

#80 - The Evaluation of College Remedial Programs, by Jeffrey K. Smith and others. 12/81, $8.50.

#79 - An Introduction to Rasch's Measurement Model, by Jan-Eric Gustafsson. 12/81, $5.50.

#78 - How Attitudes Are Measured: A Review of Investigations of Professional, Peer, and Parent Attitudes toward the Handicapped, by Marcia D. Horne. 12/80, $5.50.

#77 - The Reviewing Processes in Social Science Publications: A Review of Research, by Susan E. Hensley and Carnot E. Nelson. 12/80, $4.00.